Nicholas Burka

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EDUCATION

VASSAR COLLEGE
B.A. in Computer Science & Cognitive Science
May 2017 | Poughkeepsie, NY
GPA: 3.69

HUNTER COL. HIGH SCHOOL
June 2013 | New York, NY
Beatrice Reuss Award for Commitment to Musical Life at Hunter

LINKS

Github:// **nicholasburka**
LinkedIn:// **nicholas-burka**

COURSEWORK

Current
Robotics: Science and Systems
Machine Learning & Pattern Recognition
Machine Learning Practical
Past
Intelligent Robotics
Perception and Action
Knowledge and Cognition
Analysis of Algorithms
Computer Organization
Data Structures

SKILLS

LANGUAGES
Skilled:
Java • Scala • Python • Javascript
Racket/Scheme • Arduino
Familiar:
C • Matlab • CSS • PHP • LaTeX

FRAMEWORKS
OpenCV • ROS • KISS • WordPress

ACTIVITIES

WVKR 91.3 FM
Tech Director & Jazz Director
September 2014 - Present
Poughkeepsie, NY

VASSAR JAZZ COMBO
Trumpeter
September 2013 - Present
Poughkeepsie, NY

WORK EXPERIENCE

INTERDISCIPLINARY ROBOTICS LAB | Research Assistant
May 2015 - Present | Poughkeepsie, NY

- Received scholarship to assist Professors **Ken Livingston** and **John Long** through Vassar College URSI program.
- Tested several generations of neural network configurations in evolutionary robotics experiment to determine correlation between modularity and evolvability.
- Created OpenCV script to analyze video files from experiments. Script tracked swimming robot's position through color thresholding and contour analysis, logged data to a file, and saved a visualization image.
- Prototyped autonomous behaviors on iRobot Create 2 wheeled robot for use in upcoming experiments
- Automated directory management and data formatting tasks previously performed by hand.
- Maintained lab notebook and experimental procedure documentation.

VASSAR COMPUTER SCIENCE DEPT. | Teaching Assistant
September 2014 - May 2015 | Poughkeepsie, NY

- Taught fundamental computer science concepts to students during CS101 lab work in Racket.
- Held 8 office hours a week to review class material and homework exercises.
- Developed in class exercises.

SESAME STREET | Digital Media Intern
May 2014 - August 2014 | New York, NY

- Debugged HTML5 web games.
- Playtested third-party web games and logged issue reports.
- Ported a German Sesamstraat HTML5 web game to Sesame Workshop's website by integrating it with the Sesame CMS.
- Researched possible mobile platforms for educational efforts in India.

VASSAR COGNITIVE SCIENCE DEPT. | Intern
January 2014 - May 2014 | Poughkeepsie, NY

- Maintained and updated Cognitive Science department website.
- Designed illustrations for departmental promotional material.

PROJECTS

SPOT, THE RETREIVAL BOT
September 2015 - Present | Edinburgh, UK
Building a wheeled robot using a FitPC computer and Phidgets microcontroller. The robot will visually recognize and retrieve resource blocks in a multi-room 6 by 12 foot arena and return the blocks to its home.

TAMABOTCHI
September 2014 - December 2014 | Poughkeepsie, NY
Programmed a Botball robot that interacts with a human user and exhibits one of several emotive behaviors based on how well the user treats it.